

# Northern Alaska Landscape Conservation Cooperative

## *Arctic Plains and Mountains*



Given the remote context of conservation in Alaska, and considering that most of our partners are concentrated in the two major population centers in the state, the Alaska Region is establishing two Landscape Conservation Cooperative (LCC) offices: the Northern Alaska LCC office will be located in Fairbanks, and the Southern Alaska LCC office in Anchorage. Each of the two offices will provide science support to collaborative conservation in multiple geographic areas across the state. While full staffing levels will be according to need, this two-office model will maximize our ability to identify and take advantage of efficiencies where they exist and allow some positions to be shared between geographic areas where possible. In FY 2010, the Alaska Region will establish the Northern Alaska Landscape Conservation Cooperative office to continue collaborative efforts initiated in 2009 to identify critical information needs in the Arctic (Arctic Plains and Mountains geographic area).



*Caribou on the 1002 Area of the Arctic Refuge coastal plain, with the Brooks Range mountains in the background by USFWS.*

### Geography

The Northern Alaska Landscape Conservation Cooperative spans approximately 204,000 km<sup>2</sup> and three ecoregions across Alaska's North Slope: the Arctic Coastal Plain, Arctic Foothills, and the Brooks Range. The area is bounded on the west and north by the Chukchi and Beaufort seas, covers the full east-west extent of Alaska from the U.S.-Canada boarder to the Chukchi Sea, includes the northern-most extension of the Rocky Mountains, and is underlain by continuous permafrost.

### Priority Species and Habitats

The Northern Alaska LCC will focus initially on terrestrial and freshwater habitats of the Arctic. Changes already observed in arctic terrestrial landscapes include rapidly eroding shorelines, melting ground ice, and increased shrub growth at high latitudes. The 20-million-acre Arctic National Wildlife Refuge contains the only protected arctic ecosystem in the U.S. The Coastal Plain contains one of the largest blocks of sedge wetland in the circumpolar Arctic (one-quarter of global distribution) and

provides breeding grounds for millions of birds (more than 100 species), including species that breed nowhere else in the U.S. This geographic area provides habitat for listed species (Steller's and spectacled eiders, polar bear), candidate species (yellow-billed loon and Kittlitz's murrelet), and marine mammals of conservation concern (walrus -ESA petitioned species and other species of management concern such as Pacific black brant). These Service trust resources will serve as the priority species while protocols for establishment of population goals and objectives are developed. Alaskans living in rural areas are dependant on wild resources and are experiencing the effects of climate change directly and severely. The Service is responsible for providing opportunities to the residents of North Slope villages for continued subsistence harvest.

The integrated efforts of the Northern Alaska LCC will result in a better understanding of how the landscapes, the fish and wildlife resources they support, and the human cultures and economies that depend on them will respond to

changing conditions and lead to a more coordinated approach to our management responsibilities.

### Organization

The Northern Alaska LCC will be co-located in Fairbanks with other Service offices, the world-class climate science capability of the University of Alaska Fairbanks (UAF), and other partners. The Service will continue to provide leadership in implementing biological planning and conservation design in the Arctic and partner with other management agencies (Bureau of Land Management, National Park Service and State of Alaska) to implement conservation strategies. The Service is currently working with its partners to define the LCC's organization, operation and governance.

### Partners

Land management and ownership within the Arctic Plains and Mountains region is split among Bureau of Land Management (45 percent of the total area), State of Alaska (20 percent), Fish and Wildlife Service (17 percent), Native

lands (13 percent), National Park Service, private owners, and the Department of Defense. Key Northern Alaska LCC partners will include these and other Federal, State, Native, and local land and resource management agencies. Non-governmental organizations, including The Nature Conservancy and Audubon Alaska developed geospatial models for conservation design in the arctic region. UAF employs renowned physical and biological arctic researchers who are instrumental for building capacity. A key UAF partner is the Scenarios Network for Alaska Planning, whose mission is to link UAF researchers with agencies and NGOs to develop management-relevant spatial models of environmental change. On a national/international level, coordination and science partnership has occurred through interaction with SEARCH, CAFF, the Toolik and Bonanza Creek Long-Term Ecological Research sites, and other researchers working with the National Science Foundation.

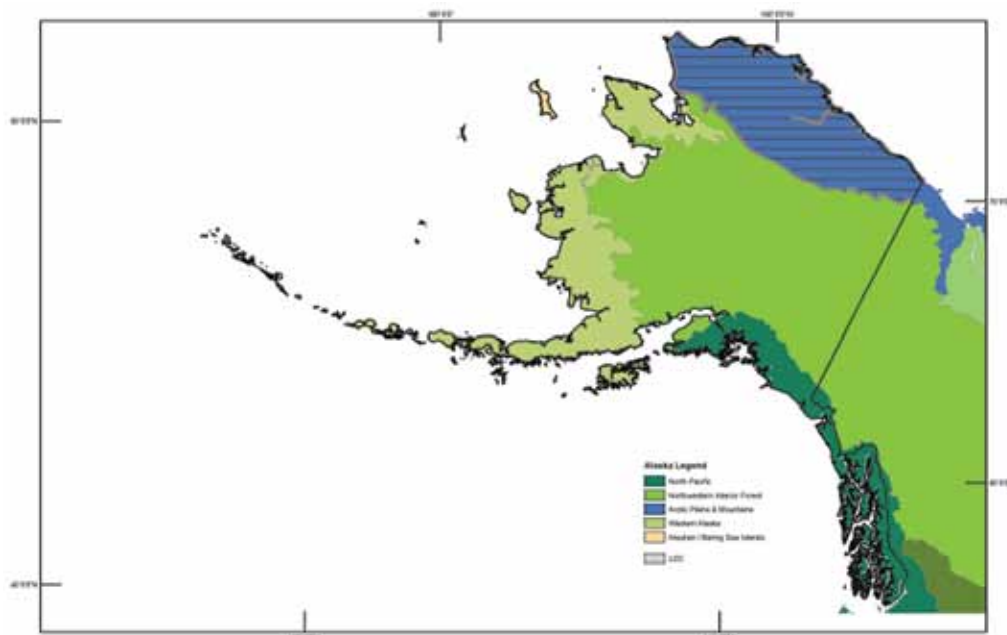
### Capacities

In 2009, the Region initiated landscape conservation planning and began preparations for establishing the Northern Alaska LCC beginning 2010 by:

- Hired a full-time coordinator/ecologist.
- Identified preliminary objectives (population goals and supporting habitat goals)
- Hosted WILDREACH Workshop, attended by more than 100 physical and biological scientists, that served as a springboard for developing partnerships, produced a comprehensive 130-page report outlining current knowledge, and recommended next steps in refining objectives, filling data gaps, and identifying downscaled model needs.

Upon allocation of 2010 funds the Region will establish the Northern Alaska LCC with capacity for the Arctic Plains and Mountains geographic area that includes:

- Coordinator/partnership liaison to work with Service programs and partners to refine biological objectives/conservation design;
- Geospatial specialist/database manager to obtain spatial data from various different partners to form the base data framework for developing GIS-based conceptual models, conservation design, and tracking conservation delivery for Arctic species;



- Science Technology Coordinator to coordinate science gathering activities;
- Spatial/population modeler to work with partners to develop models that couple climate and physical processes to habitat availability and populations; and
- Landscape ecologist/Conservation planner to assist Service staff and partners in conservation planning and design.

Other capacities to be provided through the LCC include remote sensing and image processing specialist, biometrician, spatial statistician, conservation geneticist, Web designer/manager.

### Timeline

FY 2008 - Began Arctic Strategic Habitat Conservation planning

FY 2009 - Hired Arctic Plains and Mountains Area Coordinator; hosted WILDREACH Workshop; began identifying conservation objectives

FY 2010 - Increase capacity to build upon efforts above to refine population goals and begin conservation planning/design for Arctic Plains and Mountains geographic area and initiate SHC efforts for the Northwestern Interior geographic area

FY 2011 - Expand LCC capacity and field office capability to other geographic areas.

### Cost

FY 2009 - Redirected staff/base funds (\$80,000) and obtained NFWF funding

(\$160,000). BP settlement funds (NFWF) targeted via an RFP process to fund research (+\$300,000) that leverages funds with those of partners to fill key data gaps for the Alaska geographic area.

In FY 2010 funding requested for acquiring data, developing downscaled models, and hiring necessary staff. Request \$2.5 million for increased capacity.

### For More Information

Charla Sterne, USFWS Alaska Region Climate Change Coordinator, 907/786 3471 or [charla\\_sterne@fws.gov](mailto:charla_sterne@fws.gov)